

## **Inter-Building Transportation of Plutonium-Contaminated Gloveboxes and Equipment**

**Rocky Flats Environmental Technology Site (RFETS)  
In Partnership with the Office of Science & Technology**

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### ***Introduction***

In FY2001, the DOE Office of Science and Technology (OST) and the Deactivation and Decommissioning Focus Area (DDFA) partnered with the Rocky Flats Environmental Technology Site (RFETS) supporting an Accelerated Site Technology Deployment (ASTD) project. This project will provide a means to safely transport plutonium-contaminated gloveboxes, tanks, and equipment that require size reduction from the buildings at the Site to a centralized size reduction station, such as the Remote Operated Size Reduction System (ROSRS).

### ***Technical Need***

A significant cost in D&D of buildings at RFETS is the size reduction and packaging of gloveboxes and other contaminated equipment prior to demolition of the buildings. In order to fully utilize the ROSRS as a centralized size reduction resource, RFETS needs to be capable of feeding contaminated material into the system from various buildings on a continuous basis.

### ***System Description***

The project will deploy a Standard Transport On-Site Management Package (STOMP) and Sealed Building Penetration Chambers (SBPC). These enabling technologies will contribute significantly to meeting the Site's 2006 closure schedule. The STOMP will comprise a drive vehicle and carrier assembly; a reusable, permanently attached container with an engineered building seal mechanism; and three to four building penetration chambers that seal to the transport container during loading. The STOMP will accommodate the transport of gloveboxes, equipment and material up to 6 feet wide x 6 feet high x 12 feet long. The

SBPC will provide a method of safely removing the contaminated equipment from the individual buildings and placing them into the STOMP for transport to the central size reduction station. The SBPCs will be installed through either existing building openings, such as windows or doors, or newly constructed openings. These chambers will serve as airlocks, isolating and minimizing potential impacts to building ventilation systems and air flow balance.

### ***Benefits***

The benefits that will be derived from deploying this integrated system will be full utilization and capitalization of the throughput capability of the ROSRS and other shared size reduction and packaging resources at RFETS. Optimization of size reduction and packaging activities will increase productivity and thereby accelerate D&D schedules. Other significant benefits include enhanced worker safety and lower life-cycle costs to size reduce and package plutonium-contaminated equipment at RFETS.

### ***Status***

This ASTD project was first funded in December 2000. The feasibility of the STOMP and SBPC were assessed as part of the Site's feasibility study for a Centralized Automated Modular Mobile (CAMM) Size Reduction System. These integral subsystems were fully evaluated considering technical feasibility, cost and performance requirements, personnel safety, operational deployment, and environmental and regulatory considerations. It is expected that deployment will begin at RFETS in mid 2002 following final engineering design and procurement of these enabling subsystems.



**Project Funding (in Thousands)**

<b>Funding Source</b>	<b>FY01</b>
<b>OST</b>	<b>\$1,500</b>
<b>Non-OST</b>	<b>\$3,700</b>

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**For more information about the deployment of the Inter Building Transport System  
at the Rocky Flats Environmental Technology Site, contact:**

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